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The Lister Hill Center Integrated Library System (ILS)

by

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There is considerable interest in, and perhaps some confusion about, NLM's efforts to develop a minicomputer-based Integrated Library System (ILS). This article will provide a brief overview and current status of the ILS to the biomedical library community. It is important that the Library community distinguish clearly between capabilities not yet developed and those that are completed or nearly completed.

The goal is to develop an ILS which may be adopted by health science libraries at all levels to improve their services, to allow better management of library collections, and to promote more effective resource sharing.

The ILS design objectives are: 1) modular integration of functions and files; 2) operation on a range of hardware affordable even by small libraries; 3) software that is responsive to varying demand; 4) transportability of programs; 5) multi-level user interfaces; 6) system network access; and 7) compatibility with NLM's planned MEDLARS III.

All ILS software is produced in the MIIS dialect of the higher order computer language, MUMPS.

Current Status of ILS

1. *Master Bibliographic File.* Essential to an integrated library system is the integrating or "master" bibliographic file (MBF) which supports all functions—circulation, serials control, acquisitions, cataloging, and authority files. The MBF is the core of the ILS and is completely MARC compatible, both for bibliographic and authority files. It is designed to support all modules of the ILS. The development of the MBF structure is completed.

2. *The Circulation Subsystem.* The circulation subsystem will indicate the current status of any item in the collection, whether in process or cataloged. Significant features include: a) usage statistics for internal item use as well as actual checkouts and renewals; b) reports for usage analysis and collection development; c) help capability for guiding users; d) exception-based processing to speed transactions through the system and facilitate distributed processing; and e) easily changed system parameters. These circulation capabilities and the MFB will be operational at the Army Library, Pentagon by March 1980. Additional circulation features are to be fully implemented by June 1980.

3. *Searching Capabilities on Online Catalog.* Searchable elements of the Master Bibliographic File include: a) ISBN/ISSN; b) LC card number; c) call number; d) author; e) subject

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*Mr. Goldstein is Chief, Computer Technology Branch, Lister Hill National Center; Dr. Dick is Project Leader for the ILS within the Branch.

With this issue...

Included in this issue are a Publications Supplement and an advance order form for the 1979 edition of Cumulated Index Medicus. Stories include:

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NATIONAL LIBRARY of MEDICINE
NEWS

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heading; f) author title key; g) title key; and h) item identification number. All of the above searching capabilities are now operational with the exception of subject searching, which will be operational by June 1980.

4. *Serials Check-in.* A basic serial check-in system is being developed. This system will be extended and integrated with a complete serials control module which is to be developed later.

The above four elements constitute the initial phase of ILS development. Upon their successful installation and demonstration at the Army Library, Pentagon, and after the necessary documentation is completed, the ILS computer programs as they exist at that time (June 1980) will be made available through NTIS (National Technical Information Service). By then, the design and characteristics of the ILS will be documented in a series of Lister Hill Center Reports and in articles submitted for publication.

ILS Developments

Other major elements of ILS which remain to be developed include: a) serials control; b) acquisitions; c) cataloging; d) authority file; e) generalized network access module; f) patron level interface; and g) enhancements to existing modules.

Although the cataloging module is to be completed in the future, significant progress has already been made. A Retrospective Data Entry System (RDES) has been developed and will serve as the basis for the ILS cataloging module. The RDES is being used to produce machine-readable records from NLM's pre-1965 shelf list. The RDES design supports efficient online entry, validity checking, and review of catalog records.

Present plans are to address acquisitions, authority file, and cataloging during the coming year and the other elements later. No firm completion date for these modules has been established, but will be reported as progress is made.

Communication with biomedical library personnel has been, and will remain a critical factor in the Lister Hill Center's efforts to develop and demonstrate advanced concepts of library automation. The NLM is interested in having the products of the Lister Hill Center's R&D made available to biomedical libraries and, through their collaborative efforts, to improve and extend the Library's external services to the entire medical community. However, NLM will not provide financial or operational support of its ILS developments for other libraries.

Change of Citation Format

Beginning in 1980 the publications and online output from NLM's MEDLINE-related data bases are being changed to conform to standards for bibliographic references established by the American National Standards Institute (ANSI). For journal article citations, the change means moving the date of publication from the end of the citation to a position immediately following the journal title abbreviation. Further description and explanation of the citation format change (including changes applying to monographic chapters) may be found on page vii of Part I of the January 1980 issue of *Index Medicus.*

To Our Readers

As we begin a new year, we would like to ask for your ideas about the *NLM News.* You are a diverse readership—NLM staff, librarians throughout the world (serving hospitals, schools, associations, government, and business), and nonlibrarians with special interests in NLM services. Your ideas will be helpful as we prepare and select the articles, notices, and publication lists for inclusion in the *News* each month. We are interested in working with you to improve what we think is already a useful publication, and would like to receive your general reactions as well as specific suggestions regarding the kinds of items you find especially useful, features you wish to see, or an idea for an article *you* would like to contribute. Please address your comments and suggestions to: Editor, NLM News, National Library of Medicine, Bethesda, MD 20209; or call (301) 496-6308.

One Hospital's Experience

Resource Project Grants

NLM awards Medical Library Resource Project Grants to stimulate new health information services or to add a new dimension to existing services. Projects that support resource sharing are favored, as are institutions that engage in outreach services. Thus Library consortia and audiovisual activities (especially where there is an outreach component) are frequently supported under Resource Project Grants.

The following is a description of an NLM-supported Resource Project at the 500-bed Wilson Memorial Hospital in Johnson City, New York. Johnson City is near Binghamton, in south central New York State. The account was written by **Shirley Edsall**, Ph.D., Director of Learning Resources for the hospital.

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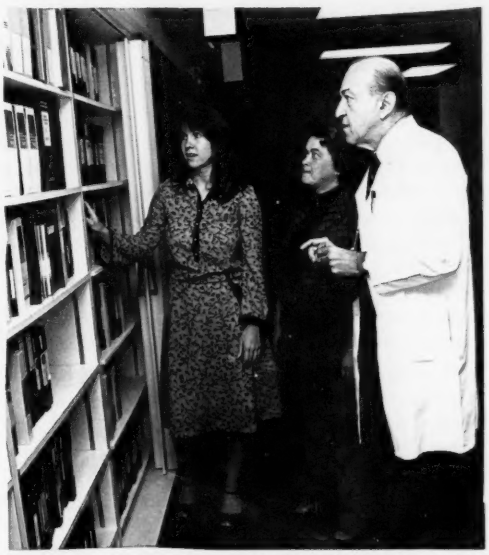
AV Center for Individualized Learning

The M.C. Stith Learning Center has been established at the Charles S. Wilson Memorial Hospital through a two-year Library Resource Project Grant awarded in 1978, totaling $87,302. As a complement to the traditional print-oriented medical library service, the learning center provides for individual and group use of audiovisual programs. Organizationally, the new center, the audiovisual production unit, and the present library together constitute the hospital's Learning Resources Department/Center.

The learning center was opened in June 1979 and usage has increased at the rate of 100 percent a month. The center also has an important role in sharing audiovisual resources among four hospitals in the Binghamton area.

Dr. Eugene Wyso, Director of Medical Education, and the hospital's Medical Education Committee were the prime movers in requesting funds for the remodeling of an old cafeteria area into an attractive self-instructional center. During the first year of the grant, emphasis was placed on renovating the space and purchasing videocassette players, TV monitors, audiocassette players, and Caramates to be used in the carrels.

Movable partitions in the learning center allow great flexibility to create one-, two-, and three-person viewing bays. Adjacent to the area allotted for carrels and materials storage, a small conference room was designed with stackable chairs and small movable tables. The room can accommodate group viewing and discussion by as many as 15 people or it can be arranged to allow for small conference sessions on the planning and design of in-house audiovisual productions. The office of the Director of Learning Resources is located adjacent to these two rooms.



Dr. Eugene Wyso, Director of Medical Education at the Wilson Memorial Hospital, reviews audiovisual programs in the new M.C. Stith Learning Center. With Dr. Wyso are 'ibrarian Gloria Gerber (left) who is helping to develop the software collection, and Shirley Edsall, Ph.D., Director of Learning Resources.

Collection development is the primary objective of the second year of the grant. Health-science materials in videocassette, audiocassette, and slide/tape format are being previewed before purchase. Directly involving the intended users in the selection process should help to promote eventual acceptance and the use of these materials.

Newly acquired audiovisuals will augment and add depth to the basic health science audiovisual materials already housed in the hospital's learning center by Clinical Campus, a sub-unit of the SUNY system. Through this arrangement third and fourth year students

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from SUNY Upstate Medical Center, who are utilizing the area hospitals for their clinical experience, will have access to the services of the learning center.

The center has been well received by the hospital administration, medical staff, nurses, allied health personnel, and other hospital employees. It is heavily used for continuing education programs and for supplementing the formal graduate medical education programs of the hospital. Since the accreditation of the hospital by the State Medical Society for offering AMA Category I continuing education credits, it is anticipated that the learning center will take an active role in providing access to self-paced, self-instructional continuing education programs for physicians in the surrounding towns and rural areas.

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Information about how to apply for Resource Project Grants may be obtained from the Division of Biomedical Information Support, Extramural Programs, National Library of Medicine, Bethesda, MD 20209.

Publication Notes

NLM Programs and Services, Fiscal Year 1979. NLM's latest annual report, with statistics and program descriptions for activities between October 1, 1978 and September 30, 1979—may be obtained without charge from the Library's Office of Inquiries. (Note: copies are being sent automatically to all institutional members of the Medical Library Association.) Please send a self-addressed mailing label with your request to: Office of Inquiries, ATTN: REPORT 79, National Library of Medicine, Bethesda, MD 20209.

Index Medicus, Vol. 21. Several changes beginning with the January 1980 issue should be noted: a Preface has been added to provide historical perspective; a new Introduction gives an up-to-date guide for using *IM*; there has been a change in the citation format to conform to ANSI standards (see page vii of the January issue, Part 1, and page 2 of this issue of the *News* for more details); and, as noted previously (*News*, September 1979), the Bibliography of Medical Reviews "Author Section" has been discontinued.

Index of NLM Serial Titles, 1980. This third edition is scheduled to be available from the Superintendent of Documents by early March; orders are now being accepted. The *Index* is a keyword-out-of context (KWOC) index produced from SERLINE, NLM's online serials data base. It contains some 33,000 entries representing all serials and numbered congresses which are on order, in process, or currently received by NLM, as well as many ceased serials in the NLM collection. It is designed to assist librarians in the rapid identification of biomedical serials and to provide the necessary information for requesting serial interlibrary loans from the National Library of Medicine. Two books, casebound. Price: $35.00 ($43.75 foreign). S/N 017-052-00208-2.

NLM Online Services Reference Manual, 1980. This comprehensive search manual for NLM's online bibliographic retrieval system (MEDLARS) is now available from the National Technical Information Service (NTIS) in Springfield, VA 22161. It supersedes all previous editions of (and supplements to) the manual and contains specific information on modes of accessing the various data bases, the commands to be used, techniques for searching, etc. A complimentary copy has already been sent to each domestic online center (one copy per code). Orders for additional copies should be sent to NTIS, including full title, Report Number PB80-114531, and remittance of $10.50 per copy ($3.50 microfiche). (The manuals are three-hole punched; the paper copy price includes index-tab dividers but not a three-ring binder.)

Notes for Medical Catalogers (Number 19, January 1980). This annual publication is prepared by NLM and covers a variety of information of interest to catalogers—NLM policies and practices and changes in NLM's classification system. *Notes for Medical Catalogers* is distributed by the Medical Library Association (919 N. Michigan Avenue, Suite 3208, Chicago, IL 60611). Copies are sent automatically to all MLA institutional members; Number 19 will accompany the February issue of the MLA Exchange. Others who wish a copy of Number 19 should send $5 with their request to MLA.

NLM Classification, 4th Edition. Since GPO has almost sold out of the first printing, NLM has decided to print a corrected fourth edition incorporating all of the changes and additions made to date, and including 1980 MeSH terms in the Index. We anticipate availability of the corrected fourth edition from GPO by late summer

1980. Meanwhile, the latest issue of *Notes for Medical Catalogers* (see above) includes a cumulative list of all modifications made to the fourth edition.

New Literature Searches. The MEDLINE-produced searches listed below may be requested (without charge) from the Library's Reference Section. A complete list of available Literature Search titles appears in *Index Medicus* and *Abridged Index Medicus*. Requests must include the full title and number of the desired searches, and should be mailed (with a self-addressed gummed label) to: Literature Search Program, Reference Section, National Library of Medicine, Bethesda, MD 20209.

LS 79-14 *Foreign medical graduates in the U.S.*
January 1973 through July 1979.
622 citations.

LS 79-15 *Penicillin-resistant gonorrhea.*
January 1977 through December 1979.
118 citations.

LS 79-16 *Lactose intolerance.*
January 1977 through December 1979.
187 citations.

Leptophos. A new bibliography on leptophos has been prepared by the Toxicology Information Response Center (TIRC). TIRC (Oak Ridge, Tennessee 37830), sponsored by NLM's Toxicology Information Program, prepares individual literature searches on toxicological subjects and produces special annotated bibliographies (such as the new one on leptophos) which are sold through the National Technical Information Service (Springfield, VA 22161).

Leptophos: an overview. (A Literature Compilation, 1969-1979, by E.M. Waters and Herbert B. Gerstner. 94 pages. 501 references.) $17.50 (paper copy only). NTIS Report Number ORNL/TIRC-78/4.

Dates Announced for AV Workshops

Although the Library's National Medical Audiovisual Center has suspended some of its normal activities as it prepares for the move to Bethesda, the Center's popular Field Training Program continues in full stride. Two workshops are being offered over the next few months:

• **Development and Evaluation of Audiovisual Instructional Materials:** provides an overview of the systems approach for designing and testing self-instructional materials before actual production; and provides practice in designing self-instructional units. Working in teams of two to four, participants develop instructional objectives, develop a testing plan and materials, list instructional events, produce a storyboard, and conduct peer reviews using the storyboard. (*Loma Linda, CA, Feb. 4-6; San Francisco, CA, Feb. 26-27; San Antonio, TX, March 11-12; Chapel Hill, NC, March 12-14 and Sept. 17-19; Buffalo, NY, March 20-22; Chicago, IL, April 9-11, Omaha, NB, June 23-25.*)

• **Designing Simulation Activities in the Health Sciences**: provides information concerning the design, evaluation, selection, and use of simulation. Practice is provided in designing simulation activities to meet the teaching needs of participants. Working in teams of two to four, participants define instructional goals and develop simulation activities to meet these goals. Initial drafts of designed activities are tried out and evaluated. (*San Francisco, CA, Feb. 5-7;* Gainesville, FL, February 20-22; Omaha, NB, April 7-9; Chapel Hill, NC, May 21-23; Chicago, IL, June 11-13.)

For further information contact:

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Robert E. Potts, Ph.D., College of Medicine, Ohio State University, Columbus, OH 43210 (614 422-3323)

David Raney, School of Dentistry, The University of North Carolina, Chapel Hill, NC 27514 (919 966-1161, ext. 354)

James R. Dunn, D.C.S., School of Dentistry, Loma Linda University, Loma Linda, CA 92350 (714 796-0141)

Neal Balanoff, Ph.D., J. Hillis Miller Health Center, University of Florida, Gainesville, FL 32610 (904 392-4151)

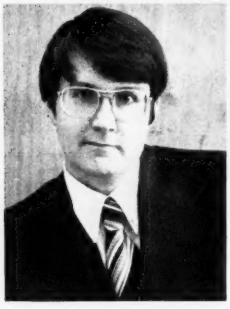
Tom Banks, Educational Television, University of California, San Francisco, CA 94143 (415 666-1958)

George Moxes, Ed.D., Michael Reese Hospital and Medical Center, Chicago, IL 60616 (312 791-2474)

Personnel Notes

New Personnel Officer: Thomas S. Reed has been appointed Personnel Officer for the National Library of Medicine. He replaces James J. Hartman who is now with the National Technical Information Service. In addition to heading the Personnel Office, Mr. Reed will also direct the management analysis activities of the Library.

Mr. Reed has a varied background of experience, having worked in the fields of personnel, general administration, budget, and grants management. He has worked with several NIH components; his most recent experience has been with the National Cancer Institute in the field of general administration. He received his B.A. in 1971 from the University of Notre Dame.



Mr. Reed

Ms. Humphreys

TSD Deputy Appointed: Betsy L. Humphreys has been named Deputy Chief of the Technical Services Division—the component of NLM's Library Operations which includes cataloging, selection/acquisitions, and serials processing.

A Phi Beta Kappa graduate of Smith College in 1969, Ms. Humphreys received an M.L.S. from the University of Maryland in 1972. From 1973 until her new appointment, she has worked in the serials processing area in a variety of capacities, most recently as Assistant Head of the Serial Records Section.

Ms. Humphreys has been the coordinator of the SERLINE project for several years and in 1978 received the National Institutes of Health Merit Award for the functional design and implementation of NLM's internal automated serials system. She is a member of the MEDLARS III task force at NLM and of the National Commission on Libraries and Information Science Advisory Committee on a National Periodicals System, among other professional committees and organizations.

Other Gains

- Jules Aronson, Lister Hill Center, Computer Specialist
- Judith Dworkin, Lister Hill Center, Clerk-typist
- Merle Tigert, Office of Administration, Secretary
- Frank L. Walker, Lister Hill Center, Electronics Engineer
- Rose Weiner, Specialized Information Services, Secretary

Losses

- Joseph Hutchins, Office of Computer and Communications Services, Supervisory Computer Systems Analyst
- Deborah Kelly, Bibliographic Services Division, Secretary
- Rita Lipsey, Bibliographic Services Division, Library Technician
- Robert Mason, Reference Services Division, Office Machine Operator
- Elizabeth Myers, Technical Services Division, Administrative Librarian
- Vernon Patterson, Office of Computer and Communications Services, Computer Operator
- Mary Tucker, Lister Hill Center, Secretary
- Virginia White, Technical Services Division, Librarian

NLM in the Literature

The following citations were retrieved from the December/January MEDLINE file. They point to recent articles in which the National Library of Medicine (or its products and services) is discussed. Another citation, non-MEDLINE, may also be of interest: **Roach, A.A.**: "The health science librarian: a member of the health care team responsive to emerging trends." *Library Trends*. 28(2): 253-262, Fall 1979.

Acuña HR: El Index Medicus latinoamericano: una aspiración se hace realidad. Educ Med Salud 13(3):209–11, 1979 **(Spa)**

Aiken D: Clinical information: where to get answers. Phys Ther 59(9):1107–9, Sep 79

Huth E: New forms for references. Br Med J 1(6179):1697–8, 23 Jun 79

Kronick DA: A regional cooperative acquisition program for monographs. Bull Med Libr Assoc 67(3):297–301, 1979 Jul;

A cooperative acquisition program for monographs for the twelve resource libraries in Region IX of the Regional Medical Library Network is described. Each of the participating libraries has agreed to purchase all books of an assigned publisher which fall within a prescribed subject–format profile. It is hoped that this will help to reduce unnecessary duplication and contribute toward the development of resources in the region.

Norman M: Continuing education within a hospital library MEDLINE consortium. Bull Med Libr Assoc 67(2):255–7, Apr 79

Schindler MK, Goldstein RK, Port J: Organizing library audiovisual services to support continuing education. Mt Sinai J Med (NY) 46(4):357–9, 1979 Jul–Aug;

Sekerak RJ: Cooperation strengthens small hospital libraries in a rural area of New England: a five-year experience. Bull Med Libr Assoc 67(3):322–9, 1979 Jul;

Before 1970, library facilities and services at the small hospitals in rural Vermont were essentially nonexistent. Similar findings were later encountered along the Connecticut River in New Hampshire and in a small area of upstate New York. The Hospital Library Development Services program was established at the University of Vermont's Dana Medical Library to improve these conditions. Financial assistance was received from the National Library of Medicine, and by the end of 1974, thirty-three hospitals had staffed libraries. Earlier that year it has been decided to begin emphasing cooperation among the developing libraries, including the production of union lists and regular meetings of staff members from geographically proximate hospital libaries to plan and implement various activities. An additional one-year award from NLM was received in 1975. Results achieved during and after the period of grant support are reported. Cooperation among hospital libraries is seen as a feasible and beneficial undertaking provided that the participating libraries are internally supported and developing.

Exhibit Features Military Art

The National Library of Medicine is pleased to exhibit some 40 works of art selected from the extensive collection of the U.S. Army Center of Military History. The paintings will be on display in the Library's lobby from January 14 through April 25, 1980.

The subjects are scenes of military medicine from World War II, Korea, and Viet Nam. They range from frontline aid being administered by corpsmen, to rear echelon hospitals, to scenes of medical research being conducted by the armed forces. The paintings were done by a variety of talented artists some of whose names, such as Pete Blume and Joseph Hirsch, will be familiar to many viewers.

The National Library of Medicine has a special interest in the subject of military medicine since the present-day collection traces its roots back to 1836 and the Library of the Army Surgeon-General's Office. That modest collection of books and journals grew over the years and became, successively the Army Medical Library, the Armed Forces Medical Library and, finally, in 1956, by act of Congress, the National Library of Medicine.

The Library is grateful to the U.S. Army Center of Military History for its cooperation in preparing the exhibition. Special thanks are due to **Brig. Gen. James L. Collins, Jr.** and **Col. Earl L. Ziebell** of the Center and to curators **Marion McNaughton** and **Marylou Gjernes** of the Center's Army Art Activity.

The public is invited to view the paintings during the Library's regular hours: Monday through Friday, 8:30 a.m. to 9:00 p.m., and Saturday, 8:30 a.m. to 5 p.m.

Convoy, by Roger Blum. Watercolor.

Serial Gap List

NLM is soliciting the help of the medical library community in filling gaps in our serial collections. If you can provide any of these items we would be most grateful. Please address them to:

National Library of Medicine
TSD-GAPS
Bethesda, Maryland 20209

AANA Journal 42: Feb 1974; 45: 6, 1977; 46: 6, 1978

Environmental Research 17: 1, 2, 1978

Industrial Hygiene Review 6: 1, 2, 1963; 7: 1, 2, 1964; 8: 1, 2, 1965; 9: 2, 1967; 11: 2, 1969; 12: 1, 2, 1970; 108: 1-7, 1978

Lab World 26: 1, 1975; 28: 4, 10, 12, 1977; 29: 2, 1978

Occasional Publications; Institute of Health Administration; Georgia State University Vols. 1-8; Vol. 13, 1975; Vol. 17

Occupational Outlook Handbook 1963-65; 1970-71

Office Pathology 1: 1, 2; 2: 1, 2; 3: 1, 2; 4: 1, 2; 5: 1, 2

Ohio Chemical Items and Topics 11: 1, 4, 1965; 13: 1, 1967

Ohio Family Physician News 19: 8-11, 1967; 20: 1, 2, 1968; 23: 11, 12, 1971; 24: 3, 4, 9, 10-12, 1972; 29: 10-12; 30: 1-3, 1978

Ohio GP News 15: 1-12; 16: 1-12; 17: 1-12

Ohio Pharmacist 12: 6, 8, 1963; 15: 4, 1966; 19: 3, 1970; 22: 1-12, 1973; 23: 1-12, 1974; 24: 1-12, 1975; 25: 1-12, 1976; 26: 1-12, 1977; 27: 1-7, 1978

Oncology Nursing Forum 5: 1, 2, 4, 1978

Program Development Series—Planned Parenthood-World Population Nos. 2, 3

Progress in Dermatology 1: 3, 1966; 1: 4, 1967; 2: 4, 1968; 3: 3, 4, 1969; 4: 4, 1970; 5: 4, 1971; 7: 2, 1973; 11: 3, 1977; 12: 1, 2, 1978

Progress Notes—Department of Medicine, Walter Reed General Hospital 5: 2-6, 1974; 6: 1-6, 1975; 7: 1-6, 1975; 8: 10, 1976; 10: 4-6, 1977

Tulane Medicine 1: 1, 3, 4, 1969; 8: 2, 1976; 9: 3, 4, 1977